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**United States Patent** [19]

Frejborg et al.

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[54] **SCREEN PLATES AND METHODS OF MANUFACTURE**

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[51] Int. Cl.<sup>5</sup> ..... B01D 29/13

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[58] Field of Search ..... 29/163.8, 447; 210/232, 210/338, 489, 490, 494.2, 497.01, 498, 499

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[57] **ABSTRACT**

The screen cylinder includes a screening plate having contoured grooves along an inflow side and a backing cylinder having a plurality of openings therethrough and disposed on the outflow side of the screening cylinder. The contoured grooves are elongated in the axial direction and are closely circumferentially spaced one from the other about the screen cylinder. In one embodiment, circumferentially extending grooves are formed along the outflow side of the screening cylinder whereby pulp flows through the contoured grooves into the recesses and then through the openings of the backing cylinder. In another embodiment, the recesses are formed on the inflow side of the backing cylinder, the screening cylinder being provided with elongated slots along its outflow side in registry with the contoured slots. In this manner, increased flow capacity is provided. Additionally, the screening cylinder is removable when worn for replacement by a fresh screening cylinder which may then be secured to the backing cylinder.

23 Claims, 4 Drawing Sheets

